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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,688	12/11/2001	Michael Garstenauer	TRG-300	9175

7590 05/19/2004
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EXAMINER

BASTIANELLI, JOHN

ART UNIT	PAPER NUMBER
3754	

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/021,688

Applicant(s)

GARSTENAUER ET AL.

Examiner

John Bastianelli

Art Unit

3754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. The examiner has waived the election of species.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: pZ. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to because Fig. 3 does not make any sense to the examiner. Fig. 3 appears to be a jumble of embodiments that are not laid out in a manner in which anyone can understand. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities: See paragraphs 2 and 3 above. Appropriate correction is required.

Claim Objections

5. Claims 4, 8, 16, 18-22, 33-36 are objected to because of the following informalities: Applicant claims that . Appropriate correction is required. In claim 4, line 4 of the claim, "an

Art Unit: 3754

intermediate storage means" has already been mentioned in claim 1. Is it supposed to be "the" or "said"? In claim 8, "moment" should be --movement--. In claim 16, "the supply pressure" is not referenced previously. In claims 18-21, claims 18 and 19, 20 and 21, 33 and 34, and 35 and 36 are repeats of each other. In claims 20-21 and 35-36, "gas-filled hydraulic" is contradictory - hydraulic means liquid. In claims 22 and 38, applicant claims "intermediate storage means, storage means or chamber". There is no chamber claimed and the two storage means are the same thing.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 1-40 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The examiner has read the disclosure multiple times and is only guessing as to how the device works as it is not described clearly. What is the reference pressure pZ? The disclosure never mentions closing valve V3. When is this done? Also, it is not understood how the valve V is closed. Applicant states Z1 is an intermediate storage means. Intermediate means in the middle. Z1 is not seen as in the middle at all. Please explain.

Art Unit: 3754

8. The drawings, specification, and claims are replete with errors as only partially disclosed above as the examiner does not have time to go through the application and point out every error. Please review the application and amend it so that it can be understood by someone reading it.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-25, as understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Bunker et al. US 6,067,946.

Bunker discloses a hydraulic drive unit for opening and closing a valve 21, wherein the opening or closing stroke acts on an intermediate storage means 35 (Fig. 9 for opening and Fig. 13 for closing) wherein the hydraulic fluid that is stored under pressure in the intermediate storage means drives the valve in the opposite stroke. The valve is seen as accelerated and decelerated in the form of a free oscillator. A control valve 47 holds the valve fast. The valves are intake/exhaust valves. The stroke travel is adjustable. A supply line compensates for losses (pump in 35). The movement of the valve is freely controllable 42. The setting values are dependant on various parameters seen as a boost condition. The drive unit is a differential cylinder and supply pressure or spring return 29 is provided. The storage means is a hydraulic

Art Unit: 3754

capacitance and is in the form of piston storage means. The position of the valve is done by sensor 54. The drive unit is a piston cylinder in an internal combustion engine.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 26-40, as understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Bunker et al. US 6,067,946.

Bunker lacks the control valve or valves are switched only when there is less than 10% of the maximum flow. It would have been obvious to one having ordinary skill in the art at the time the invention was made to switch the control valve or valves when the volume flow is less than 10% of the maximum volume flow in order to provide maximum operating efficiency of the device.

Conclusion

13. The examiner has examined the application to the best of his ability. The applicant needs to address the examiner's many questions in order for the examiner to do a proper search of the application. The examiner recommends the applicant to have an interview (telephone or personal) to explain the invention as well as fixing the disclosure and its many problems.

Art Unit: 3754

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Achten, Schechter, Kaufman, Hu and Ule disclose storage means (accumulators) in intake/exhaust valves. Childers discloses a valve with storage means (accumulators).


Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Bastianelli whose telephone number is (703) 305-0058. The examiner can normally be reached on M-F (9:00-6:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Mancene can be reached on (703) 308-2696. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JB
May 13, 2004



John Bastianelli
Primary Examiner
Art Unit 3754